UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,625	09/04/2003	Frank Dawidowsky	282723US8X	7983

22850	7590	01/25/2008	EXAMINER

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EXAMINER
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ART UNIT	PAPER NUMBER
2619	

NOTIFICATION DATE	DELIVERY MODE
01/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/656,625	DAWIDOWSKY ET AL.
	Examiner	**Art Unit**	
	Hicham B. Foud	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>24 October 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-15* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment filed on 10-24-2007 has been entered and considered.

Claims 1-15 are pending in this application.

Claims 13-15 have been added.

Claims 1-15 remain rejected as discussed below.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gorsuch et al (US 6,388,999), hereinafter referred to as Gorsuch in view of Lodha et al

(US 2003/0223430), hereinafter referred to as Lodha and further in view of Benveniste

(US 2002/0163933).

For claim 1, Gorsuch discloses a method to allocate bandwidth, which method is

intended for a central controller of a network (see Figure 1 element 104), comprising the

following steps allocating a predetermined amount of bandwidth to a certain connection

requiring a certain quality of service (see column 6 lines 21-25; subscriber 101 is

granted 20 of 64 channels to allow data rate of 160kbps), wherein an owner of the

certain connection is a requesting terminal which is a terminal of the network or the

central controller (see Figure 1, subscriber 101 requesting the bandwidth through the

reverse or backward communication channel).

Gorsuch discloses all the subject matter with the exception of freeing a certain amount

of the allocated predetermined amount of bandwidth, the certain amount being the

difference of the predetermined amount of bandwidth and an indicated needed amount

of bandwidth indicated by the owner, wherein the indicated needed amount of

bandwidth does not exceed the predetermined amount of bandwidth and in case the

owner requests a re-allocation of all or part of the freed bandwidth, immediately re-

allocating as much of the freed bandwidth as required, so that the indicated needed

amount of bandwidth is available to the owner. However, Lodha discloses a method

wherein freeing a certain amount of the allocated predetermined amount of bandwidth,

the certain amount being the difference of the predetermined amount of bandwidth and

an indicated needed amount of bandwidth indicated by the owner, wherein the indicated

needed amount of bandwidth does not exceed the predetermined amount of bandwidth

(see Figure 4B step 406; the unused allocated bandwidth) and in case the owner

requests a re-allocation of all or part of the freed bandwidth, immediately re-allocating

as much of the freed bandwidth as required, so that the indicated needed amount of

bandwidth is available to the owner (see Figure 4B step 408; letting the second queue

borrows the unused allocated bandwidth of the first queue (the owner); inherently,

burrowing the unused and getting it back when needing it). Thus, it would have been

obvious to the one skill in the art at the time of the invention to use the burrowing

method of Lodha of the unused bandwidth into the method Gorsuch for the purpose of

re-allocating unused bandwidth and therefore increase the efficiency of the system.

Gorsuch and Lodha disclose all the subject matter with the exception wherein the

network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network

can be defined as the IEEE 801.11 wireless LAN network where the stations

communicate directly with each other (see [0033] lines 1-9). Thus, it would have been

obvious to the one skill in the art at the time of the invention to use the method of

Gorsuch and Lodha in an ad-hoc network for the purpose of having the advantage of

adding quickly new devices and wherein the devices can communicate with each other

in a direct way without the need of access point.

For claim 2, Lodha discloses a method characterized by allocating some or all of

the certain amount of freed bandwidth to a connection without quality of service

requirements (see Figure 4B step 408; letting the second queue borrows the unused

allocated bandwidth of the first queue (the owner)).

For claim 3, Gorsuch discloses a method wherein the requesting terminal is

operated by reserving a predetermined amount of bandwidth for providing a certain

quality of service for the connection (see column 6 lines 21-25; subscriber 101 is

granted 20 of 64 channels to allow data rate of 160kbps) and determining the filling

status of the transmit queue which indicates how much sending data is in the transmit

queue (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how

much data is currently stored in the buffer), determining a needed amount of bandwidth

as bandwidth needed in a next transmission frame, the needed amount of bandwidth

depending on the filling status of the transmit queue and not exceeding the

predetermined amount of bandwidth (see column 7 lines 7-13; a channel assignor

monitors buffer usage to determine an urgency characteristic of each subscriber unit in

order to dynamically assign an optimum number of channel resources to be allocated to

each subscriber unit), and indicating the needed amount of bandwidth to the central

controller (see column 8 lines 41-43; an urgency factor for each data source attempting

to transmit on the reverse links 111 and see Figure 1; wherein the reverse link is from

the subscriber unit to the base station).

Claim 4 is rejected for same reasons as claim 1 and 3.

Claim 5 is rejected for same reasons as claim 1.

For claims 6, 9, 11 and 12, Benveniste discloses that ETSI HIPERLAN/2 is the

European counterpart to the American 802.11a with QOS features (see [0017]). Thus it

would have been obvious to the ordinary skill in the art at the time of invention to modify

the network as taught by Gorsuch and Lodha to an ad hoc network operated according

to the ETSI HIPERLAN/2 standard for the purpose of the direct communication of the

terminals without a network controller or base station and using the ETSI HIPERLAN/2

standard so it can operate in Europe.

Claim 7 is rejected for same reasons as claim 1.

For claim 8, Gorsuch discloses a central controller characterized by a transmit

queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds

are an indication of how much data is currently stored in the buffer), and a monitoring

means for monitoring the filling status of the transmit queue and indicating the indicated

needed amount of bandwidth, which depends on the filling status of the transmit queue,

to the bandwidth freeing means or bandwidth re-allocations means (see column 7 lines

7-13; a channel assignor monitors buffer usage to determine an urgency characteristic

of each subscriber unit in order to dynamically assign an optimum number of channel

resources to be allocated to each subscriber unit).

For claim 10, Gorsuch discloses a requesting terminal of a network having a

connection with other terminals of the network or with a central controller of the network

(see Figure 1; wherein the subscribers 101-103 are in connection with the base station

104), the connection requiring a certain quality of service and therefore a predetermined

amount of bandwidth, comprising a transmit queue for buffering sending data (see

Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is

currently stored in the buffer), characterized by a monitoring means for monitoring a

filling status of the transmit queue and sends out a request signal to the central

controller indicating a needed amount of bandwidth, which depends on the filling status

(see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an

urgency characteristic of each subscriber unit in order to dynamically assign an

optimum number of channel resources to be allocated to each subscriber unit).

Gorsuch discloses all the subject matter with the exception of explicitly showing that the

needed amount of bandwidth does not exceed the predetermined amount of bandwidth.

However, Lodha discloses that the needed amount of bandwidth does not exceed the

predetermined amount of bandwidth (see Figure 4B step 406; the unused allocated

bandwidth is the difference between the allocated bandwidth and the needed amount).

Thus, it would have been obvious to the one skill in the art at the time of the invention to

use the burrowing method of Lodha of the unused bandwidth into the method Gorsuch

for the purpose of re-allocating unused bandwidth and therefore increase the efficiency

of the system.

Gorsuch and Lodha disclose all the subject matter with the exception wherein the

network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network

can be defined as the IEEE 801.11 wireless LAN network where the stations

communicate directly with each other (see [0033] lines 1-9). Thus, it would have been

obvious to the one skill in the art at the time of the invention to use the method of

Gorsuch and Lodha in an ad-hoc network for the purpose of having the advantage of

adding quickly new devices.

For claim 13, Lodha discloses a method, wherein the allocated predetermined

amount of bandwidth corresponds to a fixed reserved amount of bandwidth (see Figure

4B, step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 14, Lodha discloses a method wherein the allocated predetermined

amount of bandwidth is allocated based on fixed capacity allocation (see Figure 4B,

step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 15, Lodha discloses a method wherein the freed bandwidth is re-

allocated in a next transmission frame (see Figure 4B, step 408; the allocation of the

unused bandwidth is for the next transmission frame).

Response to Argument

3.   Applicant's arguments with respect to claims 1-12 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

5.   **Examiner's Note**: Examiner has cited particular columns and line numbers in the

references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as

well. It is respectfully requested from the applicant in preparing responses, to fully

consider the references in entirety as potentially teaching all or part of the claimed

invention, as well as the context of the passage as taught by the prior art or disclosed

by the Examiner. In the case of amending the claimed invention, Applicant is

respectfully requested to indicate the portion(s) of the specification which dictate(s) the

structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hicham B. Foud whose telephone number is 571-270-1463. The examiner can normally be reached on Monday - Thursday 10-3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a
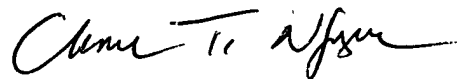
USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hicham Foud
01/17/2008

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